

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 01 JUN 2006

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|---|--|---|--|--|
| Applicant's or agent's file reference<br>26147 WO   |  | <b>FOR FURTHER ACTION</b>   |  | See Form PCT/IPEA/416                        |
| International application No.<br>PCT/B2005/000292   |  | International filing date (day/month/year)<br>07.02.2005  |  | Priority date (day/month/year)<br>09.02.2004 |
| International Patent Classification (IPC) or national classification and IPC<br>INV. F41A9/71   |  | <b>CORRECTED<br/>VERSION</b>  |  |  |
| Applicant<br>GENERAL HEADQUARTER OF THE ARMED FORCES ...ET AL   |  |   |  |  |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 2 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> |  |   |  |  |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>   |  |   |  |  |
| Date of submission of the demand<br><br>08.12.2005  |  | Date of completion of this report<br><br>31.05.2006   |  |  |
| Name and mailing address of the international preliminary examining authority:<br> European Patent Office - P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl<br>Fax: +31 70 340 - 3016   |  | Authorized officer<br><br>Gex-Collet, A-L<br><br>Telephone No. +31 70 340-4951<br> |  |  |

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/B2005/000292

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## Box No. I Basis of the report

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

### Description, Pages

1-8 as originally filed

### Claims, Numbers

1-6 received on 08.12.2005 with letter of 07.12.2005

### Drawings, Sheets

1/3-3/3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/IB2005/000292

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims | 1-6 |
|                               | No: Claims  |     |
| Inventive step (IS)           | Yes: Claims |     |
|                               | No: Claims  | 1-6 |
| Industrial applicability (IA) | Yes: Claims | 1-6 |
|                               | No: Claims  |     |

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US-A-4 862 618 (SZABO ET AL) 5 September 1989

D2: EZELL E.C.: "SMALL ARMS OF THE WORLD" 1983, STACKPOLE BOOKS

1 The following objections are raised in this communication:

The application does not meet the requirements of Article 6 PCT, because claims 1, 3, 4, 5 and 6 are not clear.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-6 does not involve an inventive step in the sense of Article 33(3) PCT.

2 The application does not meet the requirements of Article 6 PCT, because claims 1, 3, 4, 5 and 6 are not clear.

2.1 The term "generally" used in claims 1 and 6 is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear.

2.2 The term "spiral" used in claims 1, 3, 4, 5 and 6, as well as throughout the description, is mathematically defined as "a plane curve traced by a point circling about the centre but at ever-greater distances from it". Technically a "spring being of a generally spiral form" is known as a "hairspring".

In view of the drawings, however, it seems clear that the applicant meant to claim a "helical spring". Therefore the term "spiral" will be interpreted as meaning "helix" respectively "helical" in this opinion.

2.3 The expression "a spring [...] adapted to receive a plurality of cartridges" in claim 1

and 5 seems to be a typing error since it is clear that it is the housing which receives the cartridges.

- 2.4 The expression "a spring [...] adapted to receive a plurality of cartridges" in claim 1 and 5 seems to be a typing error since it is clear that it is the housing which receives the cartridges.
- 2.5 The term "loader" is understood in the field of magazines for firearms as a device for loading cartridges into a magazine. In claims 1, 5, 11 and 16, as well as throughout the description, the term "loader" appears to describe a device attached to the top of the spring in order to accommodate the lowest cartridge(s), generally known in the art as "follower".
- 2.6 The expression "a plurality of spirals [...] being pressed against said cartridges" used in alinea (b) in claim 1 is in contradiction with alinea (c) of claim 1 stating that the cartridges are pressed against the follower and not against the follower spring.
- 2.7 Claim 6, which is dependent on claim 1, repeats many of the features of claim 1. Therefore claim 6 does not meet the requirement of conciseness (Article 6 PCT).
- 3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.
- 3.1 The document D2 (cf. p. 671, fig. "Exploded view of M75 Pistol") is regarded as being the closest prior art to the subject-matter of independent claim 1, and discloses (the references in parentheses applying to this document):

A magazine for a firearm comprising:

- (a) a housing (46) having a front wall, a back wall, side walls, connecting said front wall to said back wall, and a base (49) attached to said housing;
- (b) a spring (48) mounted inside said housing (the housing obviously adapted to receive cartridges) and being biased against said cartridges, said spring (48) being adapted to be received in a recess (recess on the left side of the base 49) in said

base (49) and

(c) a loader (= follower) (47) mounted inside said housing and operatively connected to said spring (48) for enabling carrying of said cartridges and operatively positioning said cartridges, and wherein said spring terminates with a bent section adapted to be received in said base.

3.2 The subject-matter of independent claim 1 therefore differs from this known magazine in two ways:

- a) said spring includes a plurality of "helical coils" and wherein said plurality of "helical coils" generally fit inside each other when being pressed against said cartridges,
- b) said bend section is bent downward.

3.3 Two separate problems (cf. PCT-Guidelines, Part III, 13.08.7) to be solved by the present invention may therefore be regarded as:

- A) to provide a magazine with an improved storage capacity for cartridges,
- B) to provide a magazine spring with an alternative design of the bent section of the lower end.

3.4 D1 describes the features a), namely coils of progressively decreasing size, so as to nest within each other. The skilled man would consider combining the teachings of D1 and D2 in order to solve the problem A).

3.5 To bend the terminal section of the magazine spring downward instead of sideways as described in D2 is an alternative the skilled person would consider, in accordance with circumstances (there are only two ways of fixing the base with the end of the spring, snap into a recess in the side wall or in the bottom plate), without the exercise of inventive skill, in order to solve the problem B).

3.6 The features a) and b) clearly solve different, non-related problems A) respectively B). There is no functional relationship between features a) and b). Therefore independent claim 1 is merely a juxtaposition of features and not a true combination

(cf. PCT-Guidelines, Part III, 13.05).

- 3.7 As a consequence, the partial solutions a) and b) per se not involving an inventive step, claim 1 as a whole does not meet the criteria of Article 33(3) PCT either.
- 4 Dependent claims 2-6 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect inventive step, the reasons being as follows:

The feature U-shaped bend is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances (position and shape of the recess in the base), without the exercise of inventive skill, in order to solve the problem of the detailed design of the spring (claim 2).

The features of claims 3-6 are suggested in D1.

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7. December 2005

General Headquarter of the Armed .....

26147 WO

Patent Claims

- 5     1.     A magazine for firearm comprising:
- (a)     a housing having a front wall, a back wall, side walls  
         connecting said front wall to said back wall, and a base at-  
         tached to said housing;
- 10           (b)     a spring mounted inside said housing and adapted to  
         receive cartridges and being biased against said cartridges,  
         said spring being adapted to be received in a recess in said  
         base, wherein said spring includes a plurality of spirals and  
         wherein said plurality of spirals generally fit inside each other  
         when being pressed against said cartridges and
- 15           (c)     a loader mounted inside said housing and operatively  
         connected to said spring for enabling carrying of said car-  
         tridges and operatively positioning said cartridges, and  
         wherein said spring terminates with a downward bent section  
         adapted to be received in said base.
- 20     2.     The magazine as set forth in Claim 1 wherein said bent sec-  
         tion is a U-shaped like section.
3.     The magazine as set forth in Claim 1 wherein said spring in-  
         cludes a first spiral section, a second spiral section and a third spiral



section that terminates with downward bent section, and wherein said third spiral section is longer than said first and second sections.

4. The magazine as set forth in Claim 3 wherein said third spiral section generally rests on said base.

5. The magazine as set forth in Claim 1 wherein said plurality of spirals having various lengths.

6. A magazine for firearm according to Claim 1 comprising:

(a) a housing having a front wall, a back wall, side walls connecting said front wall to said back wall, and a base attached to said housing;

(b) a spring mounted inside said housing and adapted to receive a plurality of cartridges and being biased against said cartridges, said spring being of a generally spiral, said spring includes a plurality of spirals and wherein said spring has a first extension position and a second retracted position less than the sum of the thickness of said plurality of spirals; and

(c) a loader mounted inside said housing and operatively connected to said spring for enabling carrying of said cartridge and operatively positioning said cartridge.